

WHAT IS CLAIMED IS:

1. A transaction allocation apparatus that selects an operator, from among a plurality of operators, to process a transaction received from a customer and allocates the transaction to the operator selected, the
- 5 transaction allocation apparatus comprising:
- a storing unit that stores status information that is information relating to whether each of the operator is engaged in processing of a transaction or standby at this time;
  - a standby state deciding unit that decides, based on the status
  - 10 information, which operators are standby at the time the transaction is received from the customer;
  - a standby time estimating unit that estimates, when the standby state deciding unit has decided that no operator is standby, based on the status information, a standby time for each operator that is a time
  - 15 after which the operator is going to become standby; and
  - an operator selecting unit that
    - if the standby state deciding unit has decided that an operator is standby, selects the operator who is standby as the operator to process the transaction, or
    - 20 if the standby state deciding unit has decided that no operator is standby, selects an operator based on the standby time for each operator as the operator to process the transaction.

2. The transaction allocation apparatus according to claim 1,  
wherein

the storing unit stores an estimate time for each operator, which  
is a time taken by the corresponding operator to process the transaction  
5 the operator is processing at this time, and also stores a start time,  
which is a time at which the operator has started the processing of the  
transaction the operator is processing at this time, and

the standby time estimating unit estimates the standby time  
based on a current time, the start time, and the estimated time.

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3. The transaction allocation apparatus according to claim 1,  
wherein

if the standby state deciding unit has decided that no operator is  
standby, the operator selecting unit selects an operator with shortest  
15 standby time as the operator to process the transaction.

4. The transaction allocation apparatus according to claim 1,  
wherein

if the standby state deciding unit has decided that no operator is  
20 standby, the operator selecting unit selects an operator from among  
operators with standby times not more than a predetermined first time  
as the operator to process the transaction.

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5. The transaction allocation apparatus according to claim 1,  
further comprising:  
a canceling unit that cancels allocation of the transaction to the  
operator selected if the operator selected does not start processing the  
5 transaction within a predetermined time, wherein  
if allocation of the transaction is canceled by the canceling unit,  
the standby state deciding unit repeats the decision on which operators  
are standby.
- 10 6. The transaction allocation apparatus according to claim 1,  
wherein  
the transactions are received via any one of telephone, chat,  
and e-mail,  
the storing unit stores the status information separately for the  
15 transactions received via the telephone, chat, and e-mail, and  
the standby state deciding unit performs the decision on which  
operators are standby separately for the transactions received via the  
telephone, chat, and e-mail based on the respective status information.
- 20 7. The transaction allocation apparatus according to claim 1,  
further comprising:  
a skill level storing unit that stores a skill level of each operator  
that is an expertise of the operator in processing transactions; and  
an extracting unit that extracts, when the transaction is received,  
25 operators whose skill levels exceed the skill levels required to process

the transaction based on the skill levels stored, wherein

the standby state deciding performs the decision on which operators are standby from among the operators extracted by the extracting unit.

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8. The transaction allocation apparatus according to claim 7, further comprising:

a relaxed candidate extracting unit that relaxes the skill level required to process the transaction, if the standby state deciding unit

10 has decided that no operator is standby, and repeats the extraction of operators, wherein

the standby state deciding unit performs the decision on which operators are standby from among the operators extracted by the relaxed candidate extracting unit.

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9. The transaction allocation apparatus according to claim 7, wherein

the operator selecting unit selects an operator whose skill level exceeds the skill level required to process the transaction by minimum

20 as the operator to process the transaction, from among operators with standby times not more than a predetermined third time.

10. The transaction allocation apparatus according to claim 8, wherein

25 the operator selecting unit selects an operator whose skill level

exceeds by minimum the skill level relaxed from the skill level strictly required to process the transaction as the operator to process the transaction, from among operators with standby times not more than a predetermined fourth time.

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11. A transaction allocation method of selecting an operator, from among a plurality of operators to process a transaction received from a customer and allocating the transaction to the selected operator, the transaction allocation method comprising:

10 storing status information that is information relating to whether each of the operator is engaged in processing of a transaction or standby at this time;

deciding, based on the status information, which operators are standby at the time the transaction is received from the customer;

15 estimating, based on the status information, a standby time for each operator that is a time after which the operator is going to become standby, if it is decided at the deciding that no operator is standby;

selecting

if it is decided at the deciding that an operator is standby,  
20 the operator who is standby as the operator to process the transaction,  
or

if it is decided at the deciding that no operator is standby,  
an operator based on the standby time for each operator as the  
operator to process the transaction.

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12. The transaction allocation method according to claim 11,  
wherein

the storing includes storing an estimated time for each operator,  
which is a time taken by the corresponding operator to process the  
5 transaction the operator is processing at this time, and also storing a  
start time, which is a time at which the operator has started processing  
of the transaction the operator is processing at this time, and  
the estimating estimates the standby time based on a current  
time, the start time, and the estimated time.

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13. The transaction allocation method according to claim 11,  
wherein

if it is decided at the deciding that no operator is standby, the  
selecting includes selecting an operator with estimated shortest standby  
15 time as the operator to process the transaction.

14. The transaction allocation method according to claim 11,  
wherein

if it is decided at the deciding that no operator is standby, the  
20 selecting includes selecting an operator from among operators with  
estimated standby times not more than a predetermined time as the  
operator to process the transaction.

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15. The transaction allocation method according to claim 11, further comprising:

canceling the allocation of the transaction to the operator selected, if the operator selected does not start the processing the transaction within a predetermined time, wherein

if allocation of the transaction is canceled at the canceling, the deciding includes repeating the decision on which operators are standby.

10 16. The transaction allocation method according to claim 11, wherein

the transaction are received via any one of a telephone, chat, and e-mail,

the storing includes storing the status information separately for the transactions received via the telephone, chat, and e-mail, and

the deciding includes performing the decision on which operators are standby separately for the transactions received via the telephone, chat, and e-mail based on the respective status information.

20 17. The transaction allocation method according to claim 11, further comprising:

the storing includes storing a skill level of each operator that is an expertise of the operator in processing transactions; and

extracting, when the transaction is received, operators whose skill levels exceed the skill levels required to process the transaction

based on the skill levels stored, wherein

the deciding includes performing the decision on which operators are standby from among the operators extracted.

5 18. The transaction allocation method according to claim 17, further comprising:

relaxing the skill level required to process the transaction, if it is decided at the deciding that no operator is standby, wherein

the extracting includes extracting operators whose skill levels  
10 exceed the skill levels relaxed, and

the deciding step includes performing the decision on which operators are standby from among the operators extracted after the skill levels were relaxed.

15 19. The transaction allocation method according to claim 17, wherein

the selecting includes selecting an operator whose skill level exceeds the skill level required to process the transaction by minimum as the operator to process the transaction, from among operators with  
20 estimated standby times not more than a predetermined time.

20. The transaction allocation method according to claim 18, wherein

the selecting includes selecting an operator whose skill level  
25 exceeds by minimum the skill level relaxed from the skill level strictly



required to process the transaction as the operator to process the transaction, from among operators with estimated standby times not more than a predetermined time.

5     21.     A computer program that makes a computer execute a transaction allocation method of selecting an operator, from among a plurality of operators to process a transaction received from a customer and allocating the transaction to the selected operator, the computer program including instruction to realize:

10             storing status information that is information relating to whether each of the operator is engaged in processing of a transaction or standby at this time;

              deciding, based on the status information, which operators are standby at the time the transaction is received from the customer;

15             estimating, based on the status information, a standby time for each operator that is a time after which the operator is going to become standby, if it is decided at the deciding that no operator is standby;

              selecting

              if it is decided at the deciding that an operator is standby,  
20     the operator who is standby as the operator to process the transaction,  
       or

              if it is decided at the deciding that no operator is standby,  
       an operator based on the standby time for each operator as the  
       operator to process the transaction.

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22. The computer program according to claim 21, wherein  
the storing includes storing estimate time for each operator,  
which is a time taken by the corresponding operator to process the  
transaction the operator is processing at this time, and also storing a  
5 start time, which is a time at which the operator has started processing  
of the transaction the operator is processing at this time, and  
the estimating estimates the standby time based on a current  
time, the start time, and the estimated time.
- 10 23. The computer program according to claim 21, wherein  
if it is decided at the deciding that no operator is standby, the  
selecting includes selecting an operator with estimated shortest standby  
time as the operator to process the transaction.
- 15 24. The computer program according to claim 21, wherein  
if it is decided at the deciding that no operator is standby, the  
selecting includes selecting an operator from among operators with  
estimated standby times not more than a predetermined time as the  
operator to process the transaction.
- 20 25. The computer program according to claim 21, further  
comprising:  
canceling the allocation of the transaction to the operator  
selected, if the operator selected does not start the processing the  
25 transaction within a predetermined time, wherein

if allocation of the transaction is canceled at the canceling, the deciding includes repeating the decision on which operators are standby.

5     26.     The computer program according to claim 21, wherein  
the transaction are received via any one of a telephone, chat,  
and e-mail,  
the storing includes storing the status information separately for  
the transactions received via the telephone, chat, and e-mail, and  
10         the deciding includes performing the decision on which  
operators are standby separately for the transactions received via the  
telephone, chat, and e-mail based on the respective status information.

27.     The computer program according to claim 21, further  
15     comprising:  
the storing includes storing a skill level of each operator that is  
an expertise of the operator in processing transactions; and  
extracting, when the transaction is received, operators whose  
skill levels exceed the skill levels required to process the transaction  
20     based on the skill levels stored, wherein  
the deciding includes performing the decision on which  
operators are standby from among the operators extracted.

28. The computer program according to claim 27, further comprising:

relaxing the skill level required to process the transaction, if it is decided at the deciding that no operator is standby, wherein

5 the extracting includes extracting operators whose skill levels exceed the skill levels relaxed, and

the deciding step includes performing the decision on which operators are standby from among the operators extracted after the skill levels were relaxed.

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29. The computer program according to claim 27, wherein

the selecting includes selecting an operator whose skill level exceeds the skill level required to process the transaction by minimum as the operator to process the transaction, from among operators with  
15 estimated standby times not more than a predetermined time.

30. The computer program according to claim 28, wherein

the selecting includes selecting an operator whose skill level exceeds by minimum the skill level relaxed from the skill level strictly  
20 required to process the transaction as the operator to process the transaction, from among operators with estimated standby times not more than a predetermined time.